

INTERNATIONAL SEARCH REPORT

International Application No.

EP 03/13557

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C10M137/04 B21D22/20 C10M173/02 B21C9/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C10M B21D B21C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE WPI Section Ch, Week 198547 Derwent Publications Ltd., London, GB; Class A97, AN 1985-293423 XP002278226 & JP 60 202196 A (HITACHI LTD) 12 October 1985 (1985-10-12) abstract</p>	1-3,18, 19,22,35
X	<p>US:6 478 885 B1 (GOODREAU BRUCE H) 12 November 2002 (2002-11-12)</p> <p>column 6, line 48 - column 8, line 24; examples; tables 2,3 column 5, line 49 - column 6, line 8</p> <p>----- -/--</p>	1,2,8, 11,12, 17-23, 28-30,35

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the International filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

30 November 2004

Date of mailing of the international search report

14.12.04

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 220 233 A (THORNE THOMSEN FLETCHER ET AL) 30 November 1965 (1965-11-30) claims 1,7; example IV -----	1-3,13, 17-19,35
X	GB 1 004 836 A (PYRENE CO LTD) 15 September 1965 (1965-09-15) page 2, lines 34-50 page 4, lines 7-19; table 2 -----	1,17-19, 35
A	US 5 706 684 A (GONG DELI ET AL) 13 January 1998 (1998-01-13) -----	1,2,4-6, 13,14, 17-19, 21-25,35 32
X	column 9, lines 8-45; example 4 -----	
A	EP 0 146 140 A (HITACHI LTD) 26 June 1985 (1985-06-26) claim 3; figures 3,4; example 20 -----	1-3,35
X	US 4 017 335 A (MALONEY JAMES E) 12 April 1977 (1977-04-12) column 10, lines 28-44 column 10, line 53 - column 11, line 68; example 2 -----	32-34
X	US 4 313 836 A (MAXWELL JERROLD F ET AL) 2 February 1982 (1982-02-02) column 6, lines 12-33; examples 3,5-7 -----	32,34
X	GB 2 142 650 A (KAO CORP) 23 January 1985 (1985-01-23) page 7; examples 25,30; table 1 -----	32,34
X	US 2002/006880 A1 (GUILLEMENT FRANCOIS) 17 January 2002 (2002-01-17) column 1, paragraph 1-5; table 2 -----	32,34

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International application No.

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

1-30, 32-35
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

The International Searching Authority has determined that this international application contains multiple (groups of) inventions, namely:

1. Claims: 1-30, 35

Sheet metal or sheet metal blank with a lubricant coating and comprising a layer containing an organic phosphoric acid ester (claims 1-17).

Method for producing sheet metal or a sheet metal blank (according to claims 1-17) by applying to the coated sheet metal a solution containing an organic phosphoric acid ester and by applying a lubricant (claims 18-30).

Use of sheet metal or a sheet metal blank (according to claims 1-17) to produce metal bodies by moulding (claim 35).

2. Claim: 31

Use of a solution containing an organic phosphoric acid ester to treat metal surfaces.

3. Claims: 32-34

Aqueous solution containing an organic phosphoric acid ester and a water-soluble organic sulphur compound and/or an organic molybdenum compound (claims 32-33).

Concentrate for producing the aqueous solution (claim 34).

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Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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